

## CLAIMS

- 5 1. Microphone with housing and an active element inside the housing for converting sound energy into electric energy whereby an inlet is provided for directing sound energy from the surroundings to the active element, whereby the inlet comprises a first tube part and a cavity in connection with the first tube part, whereby the cavity is dimensioned to dampen ultrasonic frequencies.
- 10 2. Microphone as claimed in claim 1, whereby the cavity has a dimension L which is around  $\frac{1}{4}$  of the wavelength of the ultrasonic frequency to be damped.
- 15 3. Microphone as claimed in claim 2, whereby the cavity is shaped as a second tube part with a length dimension L which varies slightly with the cross section of the second tube part.
- 20 4. Microphone as claimed in claim 3, whereby the second tube part is curved, and is arranged in a plane essentially perpendicular to the first tube part.
5. Microphone as claimed in any of claims 2,3 or 4, whereby the cavity or second tube part is arranged in close proximity of the microphone.
- 25 6. Hearing aid with a microphone as claimed in any of claims 1-5.
7. Inlet structure for a microphone, comprising a first tube part and a cavity in connection with the first tube part, whereby the cavity is dimensioned to dampen ultrasonic frequencies.
- 30 8. Inlet structure for a microphone as claimed in claim 7, whereby the cavity has a dimension L which is around  $\frac{1}{4}$  of the wavelength of the ultrasonic frequency to be damped.

9. Inlet structure for a microphone as claimed in claim 8, whereby the cavity is shaped as a second tube part with a length dimension L which varies slightly with the cross section of the second tube part.

5 10. Inlet structure for a microphone as claimed in claim 9, whereby the second tube part is curved, and is arranged in a plane essentially perpendicular to the first tube part.

11. Inlet structure for a microphone as claimed in any of claims 8,9 or 10 whereby the cavity or second tube part is arranged in close proximity of the microphone.